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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,668	12/31/2003	Chao-Cheng Lee	TOP 347	2785

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EXAMINER	
LE, DINH THANH	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,668	LEE ET AL.	
	Examiner	Art Unit	
	DINH T. LE	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2005*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FINAL REJECTION

Claim Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-13 are rejected under 35 USC 103 (a) as being u patentable over Lennous et al (US 6,608,516) in view of Yamakido et al (US 4,250,492).

Lennous et al discloses in Figure 1 a filter circuit comprising:

- a transconductance device (OA1) for outputting a current signal according to an input voltage (IN) and a feedback voltage;
- a transresistance device (16A) coupled to the transconductance device (OA1) for outputting a output voltage according to the current signal;
- wherein the transresistance device (16A) comprises: a first capacitor (C1); a resistor (R6) coupled to the capacitor (C1) and the transconductance device (OA3)
- wherein a time constant of the filter circuit is determined by the first capacitor (C1) and the resistor (R6); and a feedback device coupled between the transconductance device (OA1) and the transresistance device (OA3) for outputting the feedback voltage according to the output voltage. wherein the transconductance device (OA1) comprises: a first operational amplifier having a first non-converting input coupled to a ground, a first converting input terminal and a first output

terminal to output the current signal;

- wherein the transresistance device (16A) comprises: a second operational amplifier (OA3) having a second non-converting input terminal coupled to a ground, a second converting input terminal and a second output terminal to output the output voltage; the first capacitor (C1) coupled to the second output terminal and the second converting input terminal; and the resistor (R6) coupled to the second converting input terminal for receiving the current signal; and

- wherein the feedback device comprises: a third operational amplifier (OA2) having a third non-converting input terminal coupled to a ground, a third converting input terminal and a third output terminal to output the output voltage; a third resistor (R5) coupled to the third output terminal and the third converting input terminal; and a fourth resistor (R3) coupled to the third output terminal for outputting the feedback voltage.

However, Lennous et al does not disclose that the resistor (R6) is an attenuator comprising a plurality of stages connected serially, wherein each stage of the resistor network comprises: an input node; an output node; a first resistor coupled between the input node and the ground; and a second resistor coupled between the input node and the output node.

Yamakido et al teaches in Figure 3 a resistive network comprising a plurality of resistors stages each including a first resistor (2R) and a second (R) for providing a selectable attenuations to attenuate the magnitude of the input signal. It would have been obvious to a person having skill in the art at the time the invention was made to employ the selectable attenuator taught by Yamakido et al in the circuit of Lennous et al for the purpose of providing selectable attenuations to attenuate the magnitude of the input signal.

With regard to claim 6, although Yamakido et al does not disclose that each of the first

resistor and the second resistor is implemented by a MOS transistor; however, the MOS transistor is configured to perform the function of a resistor for easily fabricated on an integrated circuit is well known the art. It would have been obvious to a person having skill in the art to employ the MOS transistor in the modified circuit of Lennous et al for the purpose easily implementing on an IC chip so that the size and the weight of the modified circuit would be reduced.

Response to Applicant's Arguments

The applicant argues that Yamikido is not in analogous art with the present invention because it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Lennous et al employs an attenuation means (a resistor) to attenuate a signal but does not disclose the detailed structure of the attenuator as claimed. While Yamakido suggests using an attenuation means which includes all of the claimed limitations as stated above for providing selectable attenuations to attenuate an input signal. Thus, employ the attenuator suggested by Yamakido in the circuit of Lenous et al would have been obvious at the time of the invention. Since both references suggest using the attenuator for attenuating a signal, obviously they are the analogous art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DINH T. LE
PRIMARY EXAMINER